

03050101-190*(Allison Creek)***General Description**

Watershed 03050101-190 is located in York County and consists primarily of *Allison Creek* and its tributaries. The watershed occupies 42,485 acres of the Piedmont region of South Carolina. The predominant soil types consist of an association of the Cecil-Hiwassee series. The erodibility of the soil (K) averages 0.28 and the slope of the terrain averages 10%, with a range of 2-25%. Land use/land cover in the watershed includes: 67.9% forested land, 25.2% agricultural land, 3.4% water, 2.3% urban land, 0.9% barren land, and 0.3% scrub/shrub land.

Allison Creek originates near the Town of Clover and is joined by Morris Branch, Calabash Branch (Walker Branch), Grist Branch, Johnson Branch (Rock Branch), and Big Branch before forming an arm of Lake Wylie near the City of York. Little Allison Creek is also impounded and flows into the Allison Creek arm of the lake. There are a total of 46.4 stream miles and 1,699.4 acres of lake waters in this watershed, all classified FW.

Surface Water Quality

<u>Station #</u>	<u>Type</u>	<u>Class</u>	<u>Description</u>
CW-171	S/W	FW	ALLISON CREEK AT US 321, 3.1 MI S OF CLOVER
CW-134	S/W	FW	CALABASH BRANCH AT S-46-414 2.5 MI SE OF CLOVER
CW-249/CW-694	INT/BIO	FW	ALLISON CREEK AT S-46-114
CW-200	S/W	FW	LAKE WYLIE AT SC 274 9 MI NE OF YORK
CW-201	P/W	FW	LAKE WYLIE, NORTH LAKEWOOD SD AT EBENEZER ACCESS

Allison Creek – There are two SCDHEC monitoring sites along Allison Creek. Aquatic life uses are fully supported at the upstream site (*CW-171*); however, there is a significant increasing trend in five-day biochemical oxygen demand. There is a significant decreasing trend in pH. Aquatic life uses are fully supported at the downstream site (*CW-249/CW-694*) based on macroinvertebrate community data. Recreational uses are not supported at either site due to fecal coliform bacteria excursions.

Calabash Branch (CW-134) - Aquatic life uses are fully supported, and a significant increasing trend in dissolved oxygen concentration and a significant decreasing trend in five-day biochemical oxygen demand suggest improving conditions for these parameters. There is a significant decreasing trend in pH. Recreational uses are not supported due to fecal coliform bacteria excursions; however, a significantly decreasing trend in fecal coliform bacteria suggests improving conditions for this parameter.

Allison Creek Arm of Lake Wylie – There are two SCDHEC monitoring sites along the Allison Creek arm of Lake Wylie (*CW-200, CW-201*), and aquatic life and recreational uses are fully supported at both sites. There is a significant decreasing trend in pH at both sites. Significant decreasing trends in five-day biochemical oxygen demand, total nitrogen concentration, and fecal coliform concentration suggest improving conditions for these parameters at the downstream site *CW-201*.

NPDES Program

Active NPDES Facilities

RECEIVING STREAM
FACILITY NAME
PERMITTED FLOW @ PIPE (MGD)

NPDES#
TYPE
COMMENT

ALLISON CREEK TRIBUTARY
 NORTH SAFETY PRODUCTS
 PIPE #: 001 FLOW: M/R

SC0002801
 MINOR INDUSTRIAL

ALLISON CREEK ARM OF LAKE WYLIE
 DUKE POWER CO./CATAWBA NUCLEAR STATION
 PIPE #: 001-005 FLOW: M/R

SC0004278
 MAJOR INDUSTRIAL

Nonpoint Source Management Program

Land Disposal Activities

Landfill Facilities

LANDFILL NAME
FACILITY TYPE

PERMIT #
STATUS

DUKE POWER CO.
 INDUSTRIAL

463303-1601 (IWP-192, IWP-128)
 ACTIVE

Growth Potential

The majority of this watershed is rural in nature; however, portions of the Town of Clover and areas fronting and near Lake Wylie have existing concentrated development. There are also a few areas of intensive farming. Water and sewer services are available in the immediate vicinity of Clover, and water has been extended along S.C. Hwy. 274 near Lake Wylie. Future growth trends should show continued residential development on Lake Wylie, continued expansion around Clover, and increasing residential growth scattered throughout the rural areas. The Town of Clover eliminated its discharge and tied in with the City of Gastonia, N.C.

Watershed Protection and Restoration

Total Maximum Daily Loads (TMDLs)

A TMDL was developed by SCDHEC and approved by EPA for *Allison Creek* water quality monitoring site CW-171 to determine the maximum amount of fecal coliform bacteria it can receive from nonpoint sources and still meet water quality standards. The primary sources of fecal coliform to the stream were determined to be runoff from agricultural activities, cattle-in-streams, and failing septic systems in the watershed. The TMDL states that a 67% reduction in fecal coliform loading from urban sources is necessary for the stream to meet the recreational use standard.

A TMDL was also developed by SCDHEC and approved by EPA for *Calabash Creek* (a tributary of Allison Creek) water quality monitoring site CW-134 to determine the maximum amount of fecal coliform bacteria it can receive from nonpoint sources and still meet water quality standards. The primary source of

fecal coliform to the stream was determined to be runoff from the urban land in the watershed. The TMDL states that a 74% reduction in fecal coliform loading from urban sources is necessary for the stream to meet the recreational use standard. For more detailed information on TMDLs, please visit the SCDHEC's Bureau of Water homepage at <http://www.scdhec.gov/water> and click on "Watersheds and TMDLs" and then "TMDL Program".

Special Projects

TMDL Implementation for Fecal Coliform Bacteria in Allison Creek, Calabash Branch, Beaverdam Creek, and Brown Creek

The targeted areas in *Allison Creek, Calabash Branch*, Beaverdam Creek, and Brown Creek have been documented by SCDHEC as violating the water quality standard for fecal coliform. A Total Maximum Daily Load (TMDL) has since been developed and approved for these areas. The objective of this project is to reduce fecal coliform loading in Allison Creek at CW-171 by 67%, in Calabash Branch at CW-134 by 74%, in Beaverdam Creek at CW-153 by 77%, and in Brown Creek at CW-105 by 98.4% so that these watersheds meet the water quality standards for fecal coliform bacteria. There are several tools available for implementing these nonpoint source TMDLs, including nonpoint source outreach educational activities and materials. Section 319 grant funding through SCDHEC may be available to aid in implementing best management practices (BMP) within the areas of concern outside of areas deemed as Municipal Separate Storm Systems (MS4s) by the National Pollutant Discharge Elimination System (NPDES) Phase II. The Project will characterize possible sites of fecal coliform loading by using local knowledge, illicit discharge sampling, and spatial data analysis, while evaluating existing BMPs within the watershed. SCDHEC will continue to monitor water quality in these streams to evaluate the effectiveness of these measures.

Catawba Wateree FERC Re-licensing

The Federal Energy Regulatory Commission (FERC) is the agency that licenses, inspects, and oversees environmental matters related to most hydroelectric (hydro) projects. FERC licenses, which regulate the design and operation of those projects, are issued for a term of 30 to 50 years. The relicensing process typically begins 5 years before the current license expiration date and involves the applicant providing information to state and federal resource and regulatory agencies, as well as other interested parties. During traditional licensing process, environmental issues such as water quality, minimum flow releases from dams, and endangered species are addressed by states through 401 certifications required prior to new licenses being issued. In the Catawba watershed, Duke Power operates 13 hydro facilities and 11 reservoirs on the Catawba River in North and South Carolina. Seven of these facilities and 5 reservoirs are located in South Carolina, including **Lake Wylie**. All these facilities are regulated through a single license, which expires in 2008. Duke Power has initiated a "hybrid" relicensing process, which includes a collaborative process involving stakeholder negotiations, in addition to the traditional process. The Department is actively participating in the collaborative process as well as the traditional process, and Duke will apply for §401 Certification in 2006. More information about Catawba Wateree FERC relicensing can be found on the Duke Power website at: <http://www.catawbahydrolicensing.com/>.

Sustainable Environment for Quality of Life

Sustainable Environment for Quality of Life (SEQL) is a USEPA program, which addresses regional environmental planning through the Centralina Council of Governments and the Catawba Regional Council of Governments. SEQL is intended to assist local governments in the 15-county Charlotte/Gastonia/Rock Hill region to work together to promote economic growth while protecting the environment. Multiple air and water quality issues are analyzed simultaneously, while addressing transportation, water, land use, energy use, population growth and economic development. The Department has supported the program by providing air and water quality information. More information about SEQL is available at the following website: <http://centralina.org/seql/background.htm>.